1.   A method of including at least one impermeable object in a fluid simulation where a state of a fluid comprised of velocities is updated in a given region over discrete time steps by:

dividing the region into cells comprising a regular grid and then defining a velocity field which associates a velocity vector with each cell; and

recalculating the velocity field at each consecutive time step based on the state of the fluid on the previous time step and an effect of said at least one impermeable object via Navier-Stokes equations comprising calculation of advection and pressure effects;

the method of including said at least one impermeable object comprising:

identifying surfaces of said at least one impermeable object in the given region to define cells contained within said at least one impermeable object and to define closest fluid containing cells within the fluid;

assigning a value to the velocity vectors associated with the cells contained within said at least one impermeable object when the velocity field is used for the calculation of the advection and pressure effects, which is copied from the closest fluid containing cell; and

when the value includes a normal component which would cause motion of the fluid into said at least one impermeable object, removing the normal component; and

storing the values of the velocity vectors associated with the cells contained within said at least one impermeable object with said normal components being removed therefrom.

7.   A method of including at least one impermeable object in a fluid simulation where a state of a fluid is updated in a given region over discrete time steps by:

dividing the region into cells comprising a regular grid; and

recalculating the fluid state at each consecutive time step based on the state of the fluid on the previous time step and an effect of said at least one impermeable object via Navier-Stokes equations;

the method of including said at least one impermeable object comprising:

identifying surfaces of said at least one impermeable object in the given region;

defining said at least one impermeable object as a level set with level set values representing a signed distance to a nearest surface of said at least one impermeable object, in conjunction with a velocity field comprising velocities of the nearest surface of said at least one impermeable object;

storing, in conjunction with the level set values representing the signed distance to the nearest surface of said at least one impermeable object, the velocities of the nearest surface of said at least one impermeable object.